

Harmful Algal Poisoning Symptoms in Coastal Areas of Nigeria

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Abstract : Nigeria has an extensive coastline of 853 km long between latitude 4°10' to 6°20' N and longitude 2°45' to 8°35' E and situated in the Gulf of Guinea within the Guinea Current Large Marine Ecosystem. There is a substantial coastal community relying on this region for their livelihood of fishing, aquaculture, mariculture for various sea foods either for consumption or economic sustenance or both. Socio-economic study was conducted, using questionnaires and interview, to investigate the health symptoms of harmful algae experienced by these communities on consumption of sea foods. Eighteen symptoms were recorded. Of the respondents who experienced symptoms after consumption of sea foods, overall, more people (33.5%) experienced vomiting as a symptom, followed by nausea (14.03%) and then diarrhea (13.57%). Others were headache (9.95%), mouth tingling (8.6%) and tiredness (7.24%). The least were muscle pain, rashes, confusion, chills, burning sensation, breathing difficulty and balance difficulty which represented 0.45% each and the rest (dizziness, digestive tract tumors, itching, memory loss, & stomach pain) were less than 3% each. In terms of frequency, the most frequent symptom was diarrhea with 87.5% occurrence, closely followed by vomiting with 81.3%. Tiredness was 75% while nausea was 62.5% and headache 50%. Others such as dizziness, itching, memory loss, mouth tingling and stomach pain had about 40% occurrence or less. The least occurring symptoms were muscle pain, rashes, confusion, chills and balance difficulty and burning sensation occurring only once i.e 6.3%. Breathing difficulty was last but one with 12.5%. Visible symptom from seafood and the particular seafood consumed that prompted the visible symptoms, shows that 3.5% of the entire respondents who ate crab experienced various symptoms ranging from vomiting (2.4%), itching (0.5%) and headache (0.4%). For periwinkle, vomiting had 1.7%, while 1.2% represented diarrhea and nausea symptom comprised 0.8% of all the respondents who ate periwinkle. Some respondents who consumed fish shows that 0.4% of the respondents had Itching. From the respondents who preferred to consume shrimps/crayfish and crab, shrimps/crayfish, crab and periwinkle, the most common illness was tiredness (1.2%), while 0.5% had experienced diarrhea and many others. However, for most respondents who claimed to have no preference for any seafood, with 55.7% affirming this with vomiting being the highest (6.1%), followed closely by mouth tingling/ burning sensation (5.8%). Examining the seasonal influence on visible symptoms revealed that vomiting occurred more in the month of January with 5.5%, while headache and itching were predominant in October with (2.8%). Nausea has 3.1% in January than any season of the year, 2.6% of the entire respondents opined to have experience diarrhea in October than in any other season of the year. Regular evaluation of harmful algal poisoning symptoms is recommended for coastal communities.

Keywords : coastal, harmful algae, human poisoning symptoms, Nigeria, phycotoxins

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